



# Ramsar Sites of India

## (WETLANDS)

# Ramsar Convention: Introduction

- Intergovernmental treaty established by UNESCO - provides the framework for the conservation and wise use of wetlands and their resources.
- Adopted on 2nd February 1971 in Ramsar, Iran
- Came into force from 21st December, 1975.

# Wetland

- Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water
- Wetlands must have one or more of the following three attributes:
  - 1) at least periodically, the land supports predominantly hydrophytes;
  - 2) the substrate is predominantly undrained hydric soil; and
  - 3) the substrate is saturated with water or covered by shallow water at some time during the growing season of each year.



## **Wetlands as per the Ramsar Convention**

Wetlands are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.

For example, marine and coastal areas; Estuaries; Lakes and rivers; Marshes and peatlands; Groundwater and human-made wetlands such as rice paddies, shrimp ponds, and reservoirs.

# OBJECTIVES OF THE CONVENTION

- Designation of wetlands for inclusion in the list of Wetlands of International Importance.
- Maintenance & sustainable use of the Ramsar wetlands.
- Promotion of International Cooperation with regard to trans boundary wetlands, shared water systems, and shared species.

# The Ramsar Sites Criteria

## Group A : Sites containing representative, rare or unique wetland types

Criterion 1:- Wetland must contain a representative, rare or unique example of natural or near natural wetland type found within the appropriate bio-geographic region.

## Group B: Sites of international importance for conserving biological diversity

Criterion 2:- The wetland must support vulnerable, endangered, or critically endangered species or threatened ecological communities.

Criterion 3:- The wetland must support populations of plant and or animal species important to maintain the biodiversity of a particular bio-geographic region.

## The Ramsar Sites Criteria

Criterion 4:- The wetland must support plant and or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.

Criterion 5:- The wetland must support 20,000 or more water birds.

Criterion 6:- The wetland must regularly support 1% of the individuals in a population of one species or subspecies of water bird.

## The Ramsar Sites Criteria

Criterion 7:- The wetland must support a significant proportion of indigenous fish subspecies, species or families, life-history stages

Criterion 8:- The wetland must be an important source of food for fishes, spawning ground, nursery.

Criterion 9:- The wetland must support 1% of the individuals in a population of one species of wetland dependent non-avian animal species.

## Important facts about Ramsar sites

- ❖ Tamil Nadu has the largest number of Ramsar Sites in India with 14 Indian Wetlands.
- ❖ Chilika Lake (Odisha) and Keoladeo National Park (Rajasthan) were recognized as the first Ramsar Sites of India [Designation date : 01.10.1981]
- ❖ **Montreux Record** is maintained as part of the Ramsar List. It includes those sites where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference.

# New Ramsar Sites in India - 2021

## ✓ *In April 2021:*

- Thol Lake Wildlife Sanctuary in Gujarat
- Wadhvana Wildlife Sanctuary in Gujarat
- Khijadia Wildlife Sanctuary in Gujarat
- Haiderpur Wetland in Uttar Pradesh

## ✓ *In May 2021:*

- Bhindawas Wildlife Sanctuary in Haryana
- Sultanpur National Park in Haryana

## ✓ *In June 2021:*

- Bakhira Wildlife Sanctuary in Uttar Pradesh

# Ramsar Sites in India

S. No.	Name of Site	रामसर स्थल (वेटलैंड्स)	State	Date of Designation
1	Hokera Wetland	होकेरा वेटलैंड	Jammu and Kashmir	8.11.2005
2	Wular Lake	वुलर झील	Jammu & Kashmir	23.3.1990
3	Surinsar-Mansar Lakes	सूरिंसार-मानसर झीलें	Jammu and Kashmir	8.11.2005
4	Tsomoriri Lake	त्सो-मोरीरी	Ladakh	19.8.2002
5	Tso Kar Wetland Complex	त्सो कार आद्रभूमि परिसर	Ladakh	17.11.2020
6	Chandertal Wetland	चंद्रताल वेटलैंड	Himachal Pradesh	8.11.2005
7	Pong Dam Lake	पौंग बांध झील	Himachal Pradesh	19.8.2002
8	Renuka Wetland	रेणुका वेटलैंड	Himachal Pradesh	8.11.2005
9	Asan Conservation Reserve	आसन संरक्षण रिजर्व	Uttarakhand	21.7.2020

# Ramsar Sites in India (Uttar Pradesh)

S. No.	Name of Site	रामसर स्थल (वेटलैंड्स)	Date of Designation
10	Upper Ganga River (Brijghat to Narora Stretch)	ऊपरी गंगा नदी, ब्रजघाट से नरौरा खिंचाव	8.11.2005
11	Nawabganj Bird Sanctuary	नवाबगंज पक्षी अभ्यारण्य	19.9.2019
12	Parvati Arga Bird Sanctuary	पार्वती अरगा पक्षी अभ्यारण्य	2.12.2019
13	Saman Bird Sanctuary	समन पक्षी अभ्यारण्य	2.12.2019
14	Samaspur Bird Sanctuary	समसपुर पक्षी अभ्यारण्य	3.10.2019
15	Sandi Bird Sanctuary	साण्डी पक्षी अभ्यारण्य	26.9.2019
16	Sarsai Nawar Jheel	सरसई नावर झील	19.9.2019
17	Sur Sarovar	सुर सरोबर	21.8.2020

# Ramsar Sites in India (Uttar Pradesh)

S. No.	Name of Site	रामसर स्थल (वेटलैंड्स)	Date of Designation
18	Bakhira Wildlife Sanctuary	बखिरा वन्यजीव अभयारण्य	29.06.2021
19	Haiderpur Wetland	हैदरपुर वेटलैंड	13.04.2021

Parcham Classes

# Ramsar Sites in India

S. No.	Name of Site	रामसर स्थल (वेटलैंड्स)	State	Date of Designation
20	Beas Conservation Reserve	व्यास संरक्षण रिजर्व	Punjab	26.9.2019
21	Hariske Lake	हरिके झील	Punjab	23.3.1990
22	Kanjli Lake	कंजली झील	Punjab	22.1.2002
23	Keshopur-Miani Community Reserve	केशोपुर मिआनी कम्युनिटी रिजर्व	Punjab	26.9.2019
24	Nangal Wildlife Sanctuary	नांगल वन्यजीव अभ्यारण्य	Punjab	26.9.2019
25	Ropar Lake	रोपड़ झील	Punjab	22.1.2002
26	Bhindawas Wildlife Sanctuary	भिंडावास वन्यजीव अभ्यारण्य	Haryana	25.05.2021
27	Sultanpur National Park	सुल्तानपुर नेशनल पार्क	Haryana	25.05.2021
28	Keoladeo Ghana NP	केवलादेव राष्ट्रीय उद्यान	Rajasthan	1.10.1981

# Ramsar Sites in India

S. No.	Name of Site	रामसर स्थल (वेटलैंड्स)	State	Date of Designation
29	Sambhar Lake	सांभर झील	Rajasthan	23.3.1990
30	Nalsarovar Bird Sanctuary	नालसरोवर पक्षी अभ्यारण्य	Gujarat	24.09.2012
31	Khijadia Wildlife Sanctuary	खिजादिय वन्यजीव अभ्यारण्य	Gujarat	13.04.2021
32	Thol Lake Wildlife Sanctuary	थोल झील वन्यजीव अभ्यारण्य	Gujarat	05.04.2021
33	Wadhwana Wildlife Sanctuary	वाधवाना वेटलैंड वन्यजीव अभ्यारण्य	Gujarat	05.04.2021
34	Bhoj Wetlands	भोज वेटलैंड	Madhya Pradesh	19.8.2002
35	Bhitarkanika Mangroves	भितरकनिका मैंग्रोव	Orissa	19.8.2002
36	Chilka Lake	चिलिका झील	Orissa	1.10.1981

# Ramsar Sites in India

S. No.	Name of Site	रामसर स्थल (वेटलैंड्स)	State	Date of Designation
37	Kabartal Wetland	काबर तल	Bihar	21.07.2020
38	Sunderbans Wetland	सुंदर वन डेल्टा	West Bengal	30.1.2019
39	East Kolkata Wetlands	पूर्व कलकत्ता वेटलैंड्स	West Bengal	19.8.2002
40	Deepor Beel	दीपोर बील	Assam	19.8.2002
41	Loktak Lake	लोकतक झील	Manipur	23.3.1990
42	Rudrasagar Lake	रुद्रसागर झील	Tripura	8.11.2005
43	Lonar Lake	लोनार झील	Maharashtra	22.7.2020
44	Nandur Madhameshwar	नंदूर मधमेश्वर	Maharashtra	21.6.2019
45	Kolleru Lake	कोलेरु झील	Andhra Pradesh	19.8.2002

# Ramsar Sites in India

S. No.	Name of Site	रामसर स्थल (वेटलैंड्स)	State	Date of Designation
46	Asthamudi Wetland	अष्टमुडी वेटलैंड	Kerala	19.8.2002
47	Sasthamkotta Lake	सस्थमकोट्टा झील	Kerala	19.8.2002
48	Vembanad Kol Wetland	वेम्बनाड-कोल वेटलैंड	Kerala	19.8.2002
49	Point Calimere Wildlife and Bird Sanctuary	प्वाइंट कैलिमेरे वन्यजीव और पक्षी अभयारण्य	Tamil Nadu	19.8.2002

## Parcham Classes

## Tso Kar Wetland , Ladakh

Designation date:17-11-2020



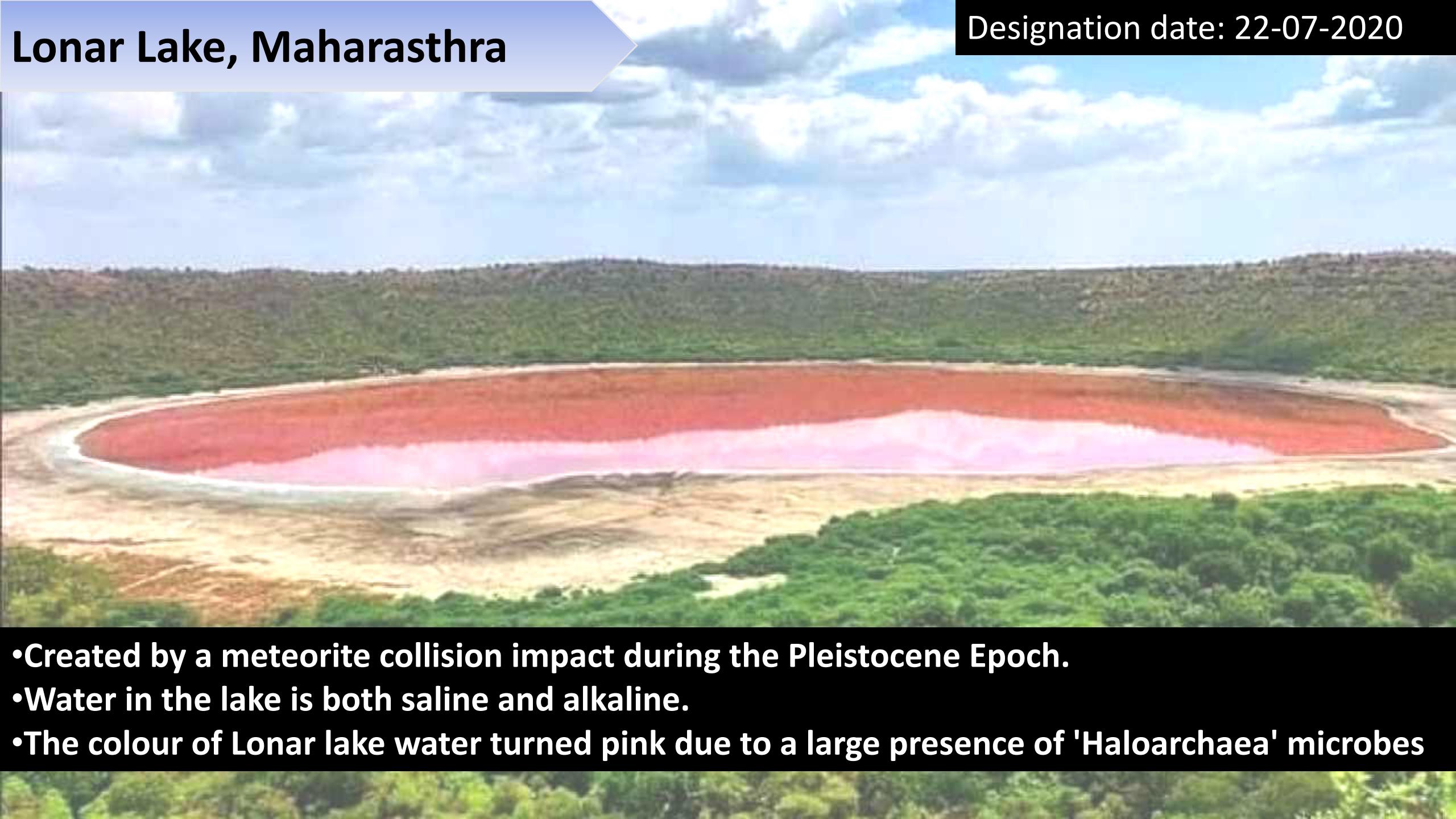
**High-altitude wetland complex, consisting of two principal waterbodies, Startsapuk Tso, a freshwater lake of about 438 hectares to the south, and Tso Kar itself, a hypersaline lake of 1800 hectares to the north.**

- It is situated in the Changthang region of Ladakh.
- It is called Tso Kar, meaning white lake, because of the white salt efflorescence found on the margins due to the evaporation of highly saline water.

# Tso Kar Wetland , Ladakh

- Endangered saker falcon (*Falco cherrug*) and Asiatic wild dog or dhole (*Cuon alpinus laniger*)
- One of the most important breeding areas in India for the black-necked crane (*Grus nigricollis*).





- Created by a meteorite collision impact during the Pleistocene Epoch.
- Water in the lake is both saline and alkaline.
- The colour of Lonar lake water turned pink due to a large presence of 'Haloarchaea' microbes



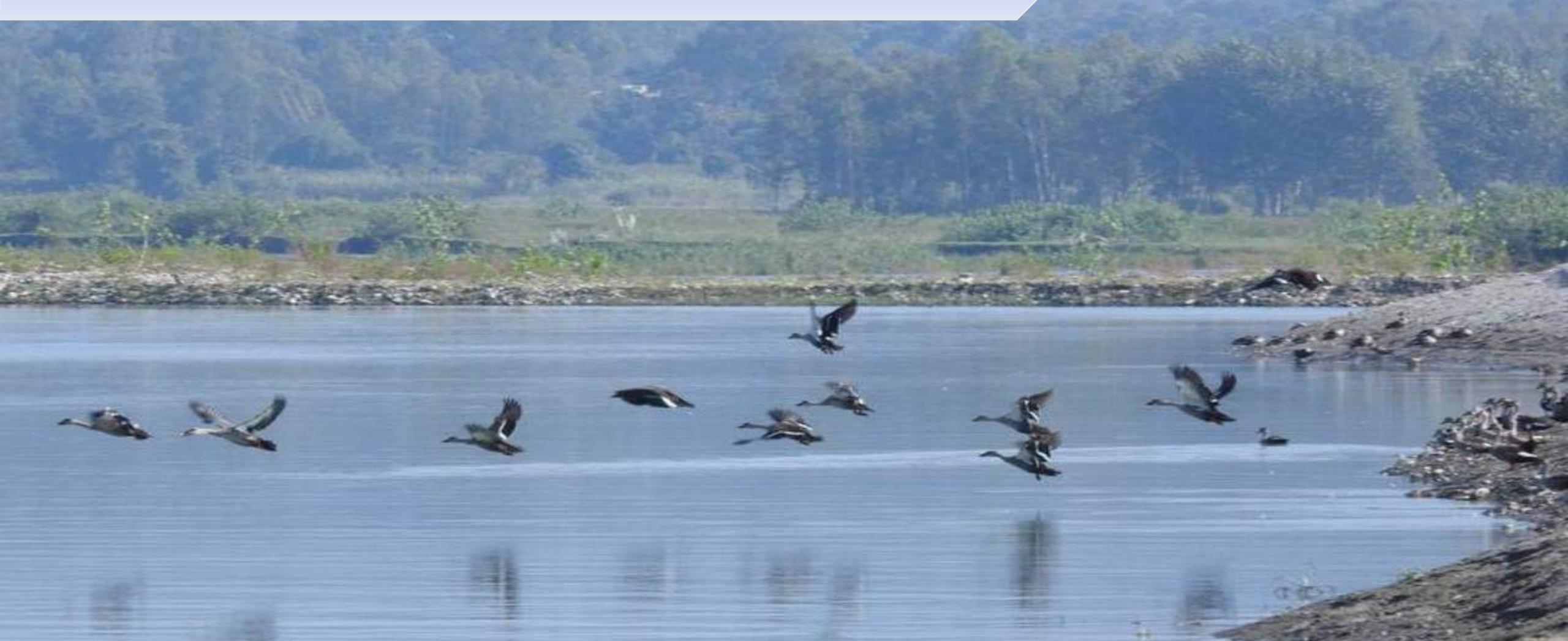
- Sur Sarovar, also known as Keetham Lake, is a human-made reservoir; originally created to supply water to the city of Agra in summer.
- Threatened species include the vulnerable greater spotted eagle (*Clanga clanga*), sarus crane (*Grus antigone*) and catfish *Wallago attu*.



- Kanwar Jheel, covers parts of Indo-Gangetic plains in the northern Bihar.
- Five critically endangered species (3 of vultures, 2 of waterbirds) :
  - the red-headed vulture, white-rumped vulture and Indian vulture (*Gyps indicus*)
  - the sociable lapwing and Baer's pochard

# Asan Conservation Reserve (Uttarakhand)

Designation date: 21-07-2020



- It is a 444-hectare stretch of the Asan River running down to its confluence with the Yamuna River in Dehradun, Uttarakhand.
- Critically endangered red-headed vulture, white-rumped vulture and Baer's pochard

# Chilika Lake

## Odisha



Notable	Critically endangered	Endangered
Irrawaddy Dolphin	Scalloped Hammerhead, Smalltooth Sawfish, Ganges Shark	Irrawaddy Dolphin, Winghead Shark, Longhead Eagle Ray

**Date of Designation**

October 1, 1981

**Location**

Puri, Khurda and Ganjam Districts

**Area**

1,16,500 hectares

**Designation Criteria**

2

**Protection Status**

15.5 km<sup>2</sup> island Nalabana designated as Bird Sanctuary

**Wetland Type**

Natural lagoon

**Management Authority**

Chilika Development Authority

# Keoladeo National Park

Rajasthan



Notable	Critically endangered	Endangered
Sarus Crane, Greater spotted Eagle, Painted Stork, Hog Deer		Greater Adjutant, Hog Deer



**Date of Designation**  
October 1, 1981

**Location**  
Bharatpur District

**Area**  
2,873 hectares

**Designation Criteria**  
2

**Protection Status**  
Keoladeo National Park

**Wetland Type**  
Freshwater marsh and swamp

**Other Designations**  
UNESCO World Heritage Site

**Management Authority**  
Rajasthan Forest Department

# Bakhira Wildlife Sanctuary (Uttar Pradesh)

Designation date:29.06.2021



- Bakhira Wildlife Sanctuary is a freshwater marsh in the Sant Kabir Nagar district.
- It is the largest natural floodplain wetland of eastern Uttar Pradesh.
- The wetland is internationally important for its birdlife as it supports over 80 species.
- It provides a wintering ground for over 25 species that migrate on the Central Asian Flyway.

# Haiderpur Wetland (Uttar Pradesh)

Designation date:13.04.2021



- Haiderpur Wetland is located within the boundaries of Hastinapur Wildlife Sanctuary.
- Haiderpur Wetland provides habitat for numerous animal and plant species, including more than 30 species of plants, over 300 species of birds including 102 waterbirds, more than 40 fish and more than ten mammal species.

# Bhindawas Wildlife Sanctuary (Haryana)

Designation date:25.05.2021



- Bhindawas Wildlife Sanctuary is a human-made freshwater wetland, and is the largest wetland in Haryana State.
- Over 250 species use the Sanctuary throughout the year as a resting and roosting site.
- The Site supports more than ten globally threatened species including the endangered Egyptian vulture (*Neophron percnopterus*), steppe eagle (*Aquila nipalensis*), Pallas's fish eagle (*Haliaeetus leucoryphus*) and black-bellied tern (*Sterna acuticauda*).

# Sultanpur National Park (Haryana)

Designation date:25.05.2021



- The shallow lake at the core of the Sultanpur National Park is fed by the overflow from neighbouring canals and fields, and replenished by saline groundwater.
- The wetland harbours a rich plant and animal life: it supports more than 220 species of resident, winter migratory and local migratory waterbirds at critical stages of their life cycles.

# Khijadia Wildlife Sanctuary (Gujarat)

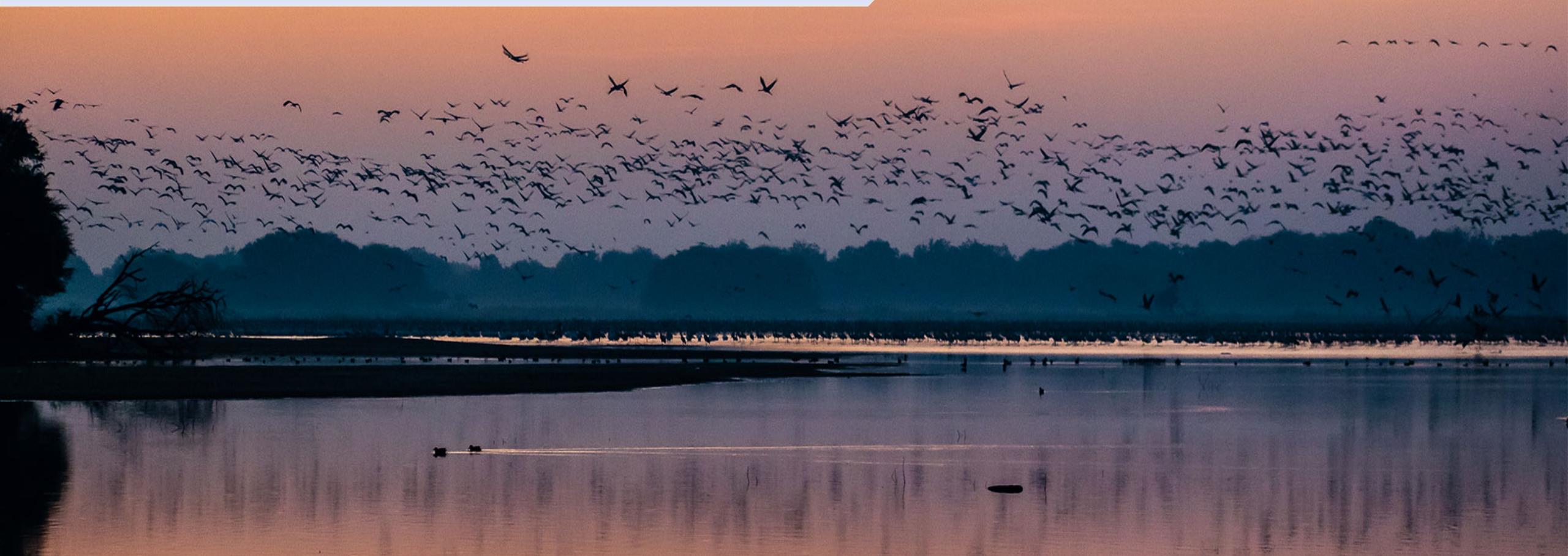
Designation date:13.04.2021



- Khijadia Wildlife Sanctuary is a freshwater wetland near the coast of the Gulf of Kutch.
- The sanctuary is now part of Marine National Park, Jamnagar, Gujarat.
- More than 180 plant species are present, including the critically endangered Indian bdellium-tree (*Commiphora wightii*), commonly called guggal.
- The Site contributes to the maintenance of hydrological regimes, erosion protection and nutrient cycling.

# Thol Lake Wildlife Sanctuary (Gujarat)

Designation date:05.04.2021



- Thol Lake Wildlife Sanctuary is on the Central Asian Flyway and more than 320 bird species can be found, making up some 57% of all the bird species of Gujarat.
- The area falls within the administrative jurisdiction of Mehsana district of Gujarat state.

# Wadhvana Wildlife Sanctuary (Gujarat)

Designation date: 05.04.2021



- Wadhvana Wetland is located in Dabhoi Tehsil (Taluka), Vadodara district, Gujarat.
- The wetland is internationally important for its birdlife as it provides wintering ground to migratory waterbirds, including over 80 species that migrate on the Central Asian Flyway.

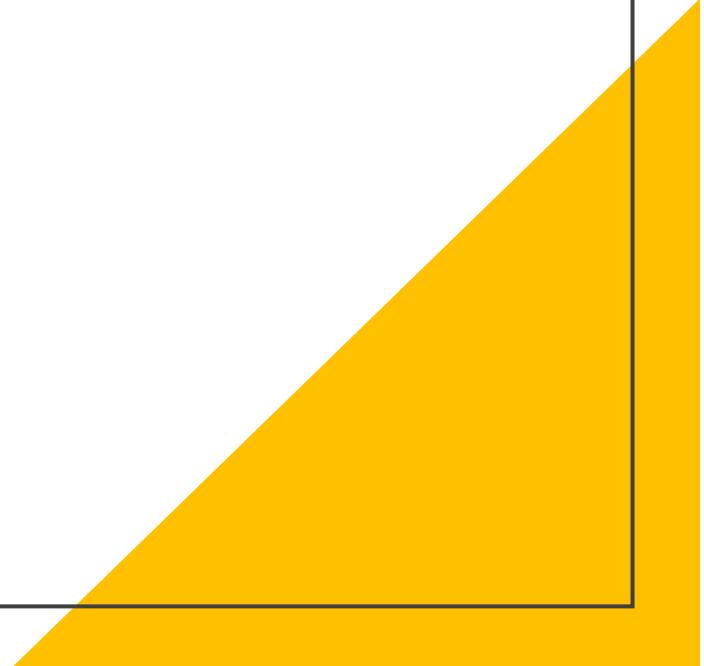
The Ramsar Convention works with the collaboration of the following organizations:

- ✓ International Union for Conservation of Nature (IUCN).
- ✓ Birdlife International
- ✓ International Water Management Institute (IWMI).
- ✓ Wetlands International
- ✓ Wildfowl & Wetlands Trust (WWT)
- ✓ WWF International

Pancham Clas



# Ramsar Sites 2022



# Introduction to Ramsar Convention

- Intergovernmental treaty established by UNESCO - provides the framework for the conservation and wise use of wetlands and their resources.
- Adopted on 2nd February 1971 in Ramsar, Iran. Came into force from 21st December, 1975. February 2 is celebrated as the International Wetlands Day
- India is one of the Contracting Parties to Ramsar Convention, signed it on 1st Feb 1982.

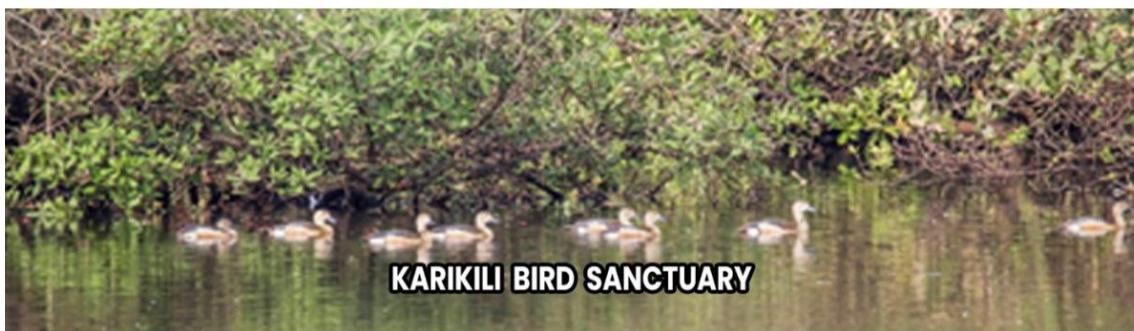
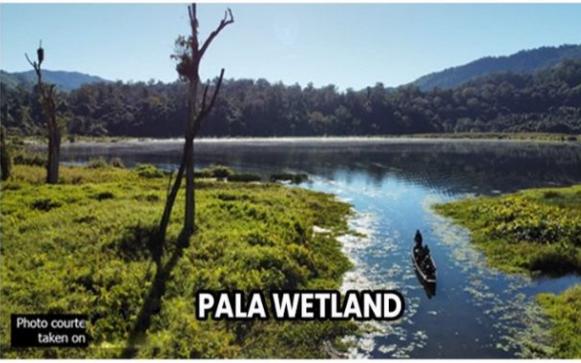
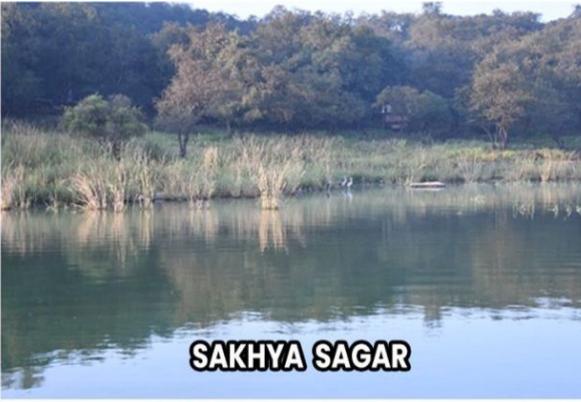
# Introduction to Indian Ramsar Sites

- India has a total 75 Ramsar sites, covering an area of 13,26,677 hectares.
- India's first Ramsar site were Chilika Lake in Odisha and Keoladeo National Park in Rajasthan.
- Vembannur Wetland Complex (Tamil Nadu) with 19.7 hectares is the smallest Ramsar Wetland site in India. Renuka wetland in Himachal Pradesh has an area of 20 hectares.
- Tamil Nadu has maximum Ramsar sites (14), followed by UP (10)

## Year wise designation of 75 Ramsar sites (source: PIB)

<b>S. No.</b>	<b>Year of Designation</b>	<b>No of site designated (As per date of designation)</b>	<b>Sites designated upto 2013 and after 2014 to till date</b>	<b>Area covered in Ha</b>
1	1981	2	<b>26</b> (1981 to 2013)	633871
2	1990	4		
3	2002	13		
4	2005	6		
5	2012	1		
6	2019	11	<b>49</b> (2014 to 2022)	692807
7	2020	5		
8	2021	14		
9	2022	19		
	<b>Total</b>	<b>75</b>	<b>75</b>	<b>1326678</b>

# 5 wetlands added as Ramsar sites (26<sup>th</sup> July, 22)



Classes

# 5 wetlands added as Ramsar sites (26<sup>th</sup> July, 22)

S.No	Name of wetland	आर्द्रभूमि का नाम	State/UT
1	Karikili Bird Sanctuary	करीकिली पक्षी अभ्यारण्य	Tamil Nadu
2	Pallikaranai Marsh Reserve Forest	पल्लीकरनई मार्श रिजर्व फॉरेस्ट	
3	Pichavaram Mangrove	पिचवरम मैंग्रोव	
4	Pala wetland	पाला आर्द्रभूमि	Mizoram
5	Sakhya Sagar	साख्य सागर	Madhya Pradesh

# 10 wetlands added as Ramsar sites (3<sup>rd</sup> Aug, 22)



Koonthankulam Bird Sanctuary,  
Tamil Nadu



Nanda Lake, Goa



Ranganathittu Bird Sanctuary,  
Karnataka



Satkosia Gorge, Odisha



Vembannur Wetland Complex,  
Tamil Nadu



Vellode Bird Sanctuary,  
Tamil Nadu



Vedanthangal Bird Sanctuary,  
Tamil Nadu



Udhayamarthandapuram  
Bird Sanctuary, Tamil Nadu



Gulf of Mannar Marine Biosphere Reserve, Tamil Nadu



Sirpur Wetland, Madhya Pradesh

# 10 wetlands added as Ramsar sites (3<sup>rd</sup> Aug, 22)

S.No	Name of wetland	आर्द्धभूमि का नाम	State
1	Satkosia Gorge	सतकोसिया गॉर्ज	Odisha
2	Nanda Lake	नंदा झील	Goa
3	Ranganathituu BS	रंगनाथितु बी एस	Karnataka
4	Sirpur wetland	सिरपुर आर्द्धभूमि	Madhya Pradesh

# 10 wetlands added as Ramsar sites (3<sup>rd</sup> Aug, 22)

S.No	Name of wetland	आर्द्रभूमि का नाम	State
5	Vedanthangal Bird Sanctuary	वेदान्थंगल पक्षी अभ्यारण्य	
6	Udhayamarthandapuram Bird Sanctuary	उदयमार्थदपुरम पक्षी अभ्यारण्य	
7	Koonthankulam Bird Sanctuary	कूनथनकुलम पक्षी अभ्यारण्य	Tamil Nadu
8	Gulf of Mannar Marine Biosphere Reserve	मन्नार की खाड़ी समुद्री बायोस्फीयर रिजर्व	
9	Vembannur Wetland Complex	वेम्बन्नूर वेटलैंड कॉम्प्लेक्स	
10	Vellode Bird Sanctuary	वेलोड पक्षी अभ्यारण्य	

# 11 wetlands added as Ramsar sites (13<sup>th</sup> Aug, 22)



Tampara Lake



Hirakud Reservoir



Ansupa Lake



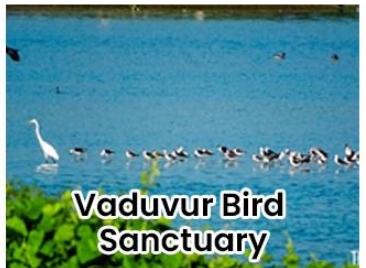
Yashwant Sagar



Chitrangudi Bird Sanctuary



Suchindram Theroor Wetland Complex



Vaduvur Bird Sanctuary



Kanjirankulam Bird Sanctuary



Thane Creek



Hygam Wetland Conservation Reserve



Shallbugh Wetland Conservation Reserve



Ramsar  
Classes

# 11 wetlands added as Ramsar sites (13<sup>th</sup> Aug, 22)

S.No.	Name of wetland	आर्द्रभूमि का नाम	State/UT
1	Tampara Lake	टाम्परा झील	
2	Hirakud Reservoir	हीराकुंड जलाशय	Odisha
3	Ansupa Lake	अंसुपा झील	
4	Yashwant Sagar	यशवंत सागर	Madhya Pradesh
5	Thane Creek	ठाणे क्रीक	Maharashtra

# 11 wetlands added as Ramsar sites (13<sup>th</sup> Aug, 22)

S. No.	Name of wetland	आर्द्रभूमि का नाम	State/UT
6	Chitrangudi Bird Sanctuary	चित्रांगुडी पक्षी अभ्यारण्य	
7	Suchindram Theroor Wetland Complex	सुचिन्द्रम थेरूर वेटलैंड कॉम्प्लेक्स	Tamil Nadu
8	Vaduvur Bird Sanctuary	वडुवुर पक्षी अभ्यारण्य	
9	Kanjirankulam Bird Sanctuary	कांजीरंकुलम पक्षी अभ्यारण्य	
10	Hygam Wetland Conservation Reserve	हाइगम वेटलैंड कंजर्वेशन रिजर्व	Jammu & Kashmir
11	Shallbugh Wetland Conservation Reserve	शालबुग वेटलैंड कंजर्वेशन रिजर्व	

# Important info about the newly added wetlands

- Sakhya Sagar Lake is an integral part of the Madhav National Park in Shivpuri, Madhya Pradesh.
- Koothankulam Bird Sanctuary (கூந்தன்குலம் பக்ஷி அம்யாரண்ய)
  - man-made wetland & is the largest reserve for breeding water birds in South India.
- Gulf of Mannar Marine Biosphere Reserve
  - This is the first Marine Biosphere Reserve in South & South -East Asia.
- Vembannur Wetland Complex
  - human-made inland tank, believed to have been constructed during Pandyan king Veeranarayana.
  - forms the southernmost tip of peninsular India.

# Important info about the newly added wetlands

- Hirakud Reservoir is the largest earthen dam in Odisha
- Ansupa Lake is the largest freshwater lake of Odisha and is an oxbow lake formed by River Mahanadi
- Vaduvur bird sanctuary is a large human-made irrigation tank
- Thane Creek has been declared as Thane Creek Flamingo Sanctuary.
- Hygam Wetland falls within the River Jhelum basin in Baramulla district.
- Shallabug Wetland Conservation Reserve is in Srinagar

# Important Ramsar sites around the world

- World's first Ramsar Site - Cobourg Peninsula in Australia, designated in 1974.
- World's largest Ramsar Site - Rio Negro in Brazil (1,20,000 km<sup>2</sup>)
- Country with maximum Ramsar Sites - United Kingdom (175 sites)
- Largest area under the Ramsar Convention protection - Bolivia (1,48,000 km<sup>2</sup>)

Parcham Classes

Identify the incorrect option:

- A) Koonthankulam Bird Sanctuary – Tamil Nadu
- B) Nanda Lake – Goa
- C) Gulf of Mannar Marine Biosphere Reserve – Tamil Nadu
- D) Satkosia Gorge – Tamil Nadu

Ans: D

Parcham Classes

Sirpur wetland is located in which state?

- A) Madhya Pradesh
- B) Karnataka
- C) Goa
- D) Tamil Nadu

Ans: A



Parcham Classes

Udhayamarthandapuram Bird Sanctuary is in which state?

- A) Karnataka
- B) Odisha
- C) Kerala
- D) Tamil Nadu

Ans: D



Parcham Classes

Which is the first Ramsar Wetland from Goa?

- A) Chitrangudi Bird Sanctuary
- B) Pala wetland
- C) Nanda Lake
- D) Ansupa Lake

Ans: C



Parcham Classes

Which state has the largest number of Ramsar Wetlands in India?

- A) Karnataka
- B) Tamil Nadu
- C) Uttar Pradesh
- D) Maharashtra

Ans: B



Parcham Classes